



## Exercise Biochemistry Review

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### The effect of physical education on children's learning and memory ability

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**Objective** Learning and memory ability is one of the symbols of higher animals. Compared with other functional markers, learning and memory ability is the most unique. Early childhood is a critical period of learning and memory in a person's life. As a child's initial stage of brain development, environmental factors in early childhood play a key role in the development of the brain. If this critical period is missed, the flexibility required for learning and memory ability will be lost. By consulting the literature, there are few studies on sports related to learning and memory in China, and the results of research on whether physical exercise can improve memory ability at home and abroad are inconsistent. This study is devoted to the analysis of the current research on the ability of sports to learn and remember, and lays the foundation for the study of the impact of physical activity on the learning and memory of young children.

**Methods** This study used literature data method, logic analysis method, and inductive method to conduct statistics and analysis on the learning and memory ability of children in sports. The literature shows that children's participation in physical activity is mainly sports games, basic gymnastics and sports dance. This study studies the effects of different physical activities on children's learning and memory ability from three aspects.

**Results** 1. The influence of sports games on children's memory ability is mainly reflected by the memory of the game process. Studies have shown that children's observation ability and memory ability are more affected by sports games, and children have significant improvement in learning and memory ability. Through training, children's ability to use memory strategies can be effectively improved. 2. The basic gymnastics movements are simple, but there are many types of movements. In the process of learning children, it is necessary to connect scattered gymnastics movements to activate the learning and memory cells of the brain. In the learning process of basic gymnastics, accompanied by the rhythm of music, the movements are varied, and the children need attention. In addition, the children are more sensitive to the movements, and are good at imitating movements. The rhythm of the temperament is strong, the interest of the children is increased, and the movements are remembered easily, memory function is activated. 3. The children's brain remembers the characteristics of the dance movements, and the body begins to display and achieve a state of physical and mental pleasure. When performing sports dance programs, the four-limb movement drives the brain movement, which stimulates the brain, enhances learning motivation, improves learning and memory ability, and promotes the intelligence development of children.

**Conclusions** During exercise, the brain can excite the motor central nervous system to the muscles, and the working condition of the muscles can also be transmitted to the brain through the motor nerves. The brain nerve center in charge of language, memory, thinking, etc. Which is excited in the nerve center of the brain in charge of exercise. When diffused, it will be protectively inhibited, so that these nerves will be relaxed. The interaction between nerves and muscles will enable the body to form a protective mechanism and form a memory effect, so that children can reduce the intensity of physical activity and reduce injuries. The results show that physical activity enhances learning and memory. The rich form of children's sports has increased the interest of young children in participating in physical activities. Not only does it improve the flexibility and sensitivity of young children through participation in sports activities, but also enhances children's

ability to learn and remember, and improve their learning and memory skills. Children's intelligence, children's body and mind have been comprehensively upgraded, laying the foundation for the future development of young children.